

REMARKS

Claims 1-7, 9-14 and 17-20 are pending in the application. By this Amendment, claims 1, 2, 7 and 17 are amended and new claims 19-20 are added. Various amendments are made for clarity and are unrelated to issues of patentability.

The Office Action rejects claims 1-2, 4-8, 10-14 and 17-18 under 35 U.S.C. §103(a) over U.S. Patent 6,459,942 to Markow et al. (hereafter Markow) in view of U.S. Patent 5,745,583 to Koizumi et al. (hereafter Koizumi) and U.S. Patent 6,011,853 to Koski et al. (hereafter Koski). The Office Action also rejects claims 3, 9 and 15 under 35 U.S.C. §103(a) over Markow, Koizumi, Koski and further in view of U.S. Patent 5,566,237 to Dobbs et al. (hereafter Dobbs). The rejections are respectfully traversed with respect to the pending claims.

Independent claim 1 recites a CODEC adapted to convert a digital speech signal into an analog speech signal, an equalizer adapted to adjust a timbre of the converted analog speech signal inputted thereto from the CODEC, the equalizer to receive analog speech signals from the microphone and the equalizer to provide the converted analog speech signals to the speaker. Independent claim 1 also recites a CPU adapted to supply a timbre control signal corresponding to a frequency band set by a user to the equalizer, and to supply a digital speech signal received from another mobile communication terminal to the CODEC, the mobile terminal comprising a mobile telephone.

The applied references do not teach or suggest these features. More specifically, the Office Action primarily relies on Markow for a majority of the claimed features. However, Markow clearly relates to a speaker phone 18 and a modem 24. See FIG. 4. Markow expressly

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relates to problems relating to sound waves that travel between a speaker 14 and a microphone 16 of a speaker phone 18. Accordingly, Markow discloses acoustically coupling the speaker 14 and the microphone 16. See col. 1, lines 9-22; col. 3, lines 22-33; and col. 4, lines 4-11, for example.

The Office Action agrees that Markow and Koizumi do not disclose a mobile phone. The Office Action then relies on Koski as teaching a mobile phone. However, Koski discloses a DSP 1 and a CODEC 2 coupled to a speaker 8 and a microphone 9. See FIG. 2, for example. In other words, the alleged mobile phone shown in Koski's FIG. 2 includes a specific arrangement of the CODEC 2 and the DSP 1 with regard to a mobile phone. In contrast, Markow discloses a phone line or cellular phone 26 (FIG. 4). Therefore, a combination of Markow and Koski, if possible, would result with the features of Koski's alleged mobile phone being provided within the phone line or cellular phone 26 of Markow's FIG. 4. In other words, the alleged combination, if possibly made, would involve Koski's DSP 1 and CODEC 2 being provided with Markow's phone line or cellular phone 26. Such a combination is improper.

Further, there is no suggestion that the features regarding Koski's arrangement of the speaker phone 18 and the modem 24 may be provided within a mobile phone as alleged in the Office Action. Rather, the only suggestion for the claimed features is provided in applicant's own specification. Therefore, the Office Action clearly relies on impermissible hindsight in order to make the alleged combination. Applicant further submits that Markow's specific purpose relates to acoustic coupling between the microphone 16 and the speaker 14 of the speaker phone 18. Therefore, any alleged modification of the structure (such as providing the structures of a

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speaker phone and a modem within a mobile terminal) would effectively destroy the express purpose of Markow. Such a modification is not permissible for a determination of obviousness (when modifying a primary reference). See MPEP §2143.01(III) in which it is stated that if the proposed modification would render the reference unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. That is, Markow's disclosure must be taken as a whole as relating to the functions of a speaker phone and modem when coupled to a phone line or cellular phone 26. These features may not be modified as alleged in the Office Action so as to relate to a mobile phone (as allegedly shown in FIG. 2 of Koski) since the modification would effectively destroy the express purpose of Markow (i.e., problems of a speaker phone).

Applicant respectfully submits that Koski's FIG. 2 does not teach or suggest features relating to the CODEC, the equalizer and the alleged CPU as recited in independent claim 1. More specifically, independent claim 1 specifically recites the equalizer adapted to adjust a timbre of a converted analog speech signal inputted thereto from the CODEC. Still further, independent claim 1 recites the equalizer to receive analog speech signals from the microphone and the equalizer to provide the converted analog speech signals to the speaker. Accordingly, Koski does not teach or suggest the respective CODEC, equalizer and/or CPU as recited in independent claim 1.

For at least the reasons set forth above, the applied references (including at least Markow, Koizumi and Koski) do not teach or suggest all the features of independent claim 1. Thus, independent claim 1 defines patentable subject matter.

Independent claim 5 recites a microphone, a speaker, a CODEC, a CPU and an equalizer. The CODEC is adapted to perform an analog-digital conversion for the transmitting speech signal and a digital-analog conversion for the received speech signal. Independent claim 5 also recites that the equalizer being connected to the microphone, the speaker and the CODEC in such a fashion that the equalizer is disposed between the microphone/speaker and the CODEC, the mobile communication terminal comprising a mobile telephone. For at least similar reasons as set forth above, the applied references do not teach or suggest all these features of independent claim 5. Thus, independent claim 5 defines patentable subject matter.

Independent claim 7 recites a converting device to convert a digital signal into an analog signal where the digital signal being based on a signal received from the antenna. Independent claim 7 also recites an equalizing device coupled to the converting device to adjust the analog signal and to provide the adjusted analog signal to the speaker. Independent claim 7 also recites a control device to provide a timbre control signal to the equalizing device, the timbre control signal being based on the frequency band set by the user, the mobile terminal comprising a mobile telephone. For at least similar reasons as set forth above, the applied references do not teach or suggest all these features. Thus, independent claim 7 defines patentable subject matter.

For at least the reasons set forth above, each of independent claims 1, 5 and 7 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references. For example, dependent claim 19 recites the equalizer is provided between the

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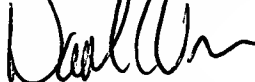
speaker and the CODEC and the equalizer is provided between the microphone and the CODEC. The applied references do not teach or suggest these features. Accordingly, dependent claim 19 defines patentable subject matter at least for this additional reason.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-7, 9-14 and 17-20 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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